

# PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>04/020 WO</b>	<b>FOR FURTHER ACTION</b>		see Form PCT/ISA/220 as well as, where applicable, item 5 below.
International application No. <b>PCT/CH2005/000142</b>	International filing date (day/month/year) <b>10/03/2005</b>	(Earliest) Priority Date (day/month/year) <b>16/03/2004</b>	
Applicant  <b>ABB RESEARCH LTD</b>			

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 4 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see Box No. I.

2. ☐ Certain claims were found unsearchable (See Box II).

3. ☐ Unity of invention is lacking (see Box III).

**4. With regard to the title,**

☐ the text is approved as submitted by the applicant.

☒ the text has been established by this Authority to read as follows:

**APPARATUS AND METHOD FOR STORING THERMAL ENERGY AND GENERATING ELECTRICITY**

**5. With regard to the abstract,**

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

**6. With regard to the drawings,**

a. the figure of the drawings to be published with the abstract is Figure No. 2

☒ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

# INTERNATIONAL SEARCH REPORT

International Application No  
PCT/CH2005/000142

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 F03D9/02 F02C6/14 F02C7/10 F03D9/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 F03D F02C F03G

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No
X	NL 8 005 063 A (JOHAN WOLTERUS VAN DER VEEN) 1 April 1982 (1982-04-01) page 1, line 10 - page 2, line 34 page 3, line 23 - page 4, line 8 page 5, line 8 - line 20 claims 3,4; figures 1,2	1-5,9,10
X	GB 2 246 602 A (DALE ELECTRIC OF GREAT BRITAIN) 5 February 1992 (1992-02-05) page 4, line 26 - page 5, line 18 page 6, line 4 - line 8 page 7, line 6 - page 8, line 16 abstract; claims 1,2,5,6; figures 1,4 -/-	1-3,5, 8-10

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex

### \* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
- \*G\* document member of the same patent family

Date of the actual completion of the international search

8 April 2005

Date of mailing of the international search report

19/04/2005

Name and mailing address of the ISA

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## INTERNATIONAL SEARCH REPORT

International Application No  
PCT/CH2005/000142

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 5 384 489 A (BELLAC ALPHONSE H) 24 January 1995 (1995-01-24) cited in the application ✓	1,8-10
A	column 3, line 10 - column 4, line 44 abstract; figures	2,4,5
A	US 5 436 508 A (SOERENSEN JENS-RICHARD) 25 July 1995 (1995-07-25) column 2, line 44 - column 3, line 6 ✓ column 3, line 50 - line 65 column 5, line 1 - line 5 column 5, line 44 - line 47 abstract; claim 2; figures 1,9,10	1,2,4-10

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No.

PCT/CH2005/000142

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
NL 8005063	A	01-04-1982	NONE	
GB 2246602	A	05-02-1992	NONE	
US 5384489	A	24-01-1995	CA 2135688 A1	08-08-1995
US 5436508	A	25-07-1995	AT 119972 T	15-04-1995
			AU 657733 B2	23-03-1995
			AU 1269892 A	07-09-1992
			CA 2101628 A1	13-08-1992
			DE 69201723 D1	20-04-1995
			DE 69201723 T2	19-10-1995
			WO 9214054 A1	20-08-1992
			DK 571486 T3	29-05-1995
			EP 0571486 A1	01-12-1993